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A Decade of Safety Success
by Tracy Scriba

The national effort to raise awareness of dangers near roadway construction passes a major milestone.

Sometimes a small idea really catches on. National Work Zone Awareness Week, now in its 11th year, is proof: What began as a small event in a single Virginia Department of Transportation (VDOT) district has grown into a national program that involves virtually every State in the Union.

Statistics suggest the effort is having a positive effect on safety. According to the National Highway Traffic Safety Administration's Fatality Analysis Reporting System, the number of work zone fatalities has decreased in the United States every year since 2002. Data show that crashes in work zones caused 720 fatalities in 2008. That figure represents a 39 percent decrease from 2002, when 1,186 work zone fatalities occurred.

As National Work Zone Awareness Week enters its second decade, a look back reveals how the campaign took root, what strategies have proven
Virginia: The Beginning

The first known Work Zone Awareness Week occurred April 7-11, 1997, in VDOT's Bristol District, in southwestern Virginia. The district's employee involvement team thought it would be a good idea to spend a week focusing on work zone safety to raise employees' awareness before they went to work on the roads for the year. The district scheduled the awareness week to coincide with the start of daylight saving time, the informal start of construction and travel season.

The internal awareness campaign went well and the district shared the idea with David Rush, VDOT's statewide engineer II/work zone safety program manager, and VDOT's public affairs office. The agency decided to take the campaign statewide in 1998, adding an external awareness component as well in recognition of the fact that motorists play an important role in reducing work zone crashes, injuries, and fatalities.

To ensure widespread involvement in the new statewide campaign, VDOT's commissioner directed the central office and each district to form teams to plan, coordinate, and implement the campaign. VDOT also formed a statewide coordinating committee to provide suggestions and share ideas, develop and distribute training materials and work zone keepsake items (key chains, magnets), and prepare statistics and taglines to distribute to the media. The committee also obtained $20,000 through a safety grant from the Virginia Department of Motor Vehicles to support these activities.

The goals of VDOT's internal campaign were to raise employees' awareness of the dangers associated with work zones and to increase their dedication to ensuring that their work zones function properly. The campaign also sought to enhance teamwork and support between field and central office employees.

The internal campaign included encouraging workers to wear high-quality safety vests and ensure proper operation of the lights on work vehicles. VDOT recommended tying orange ribbons on the vehicles' antennae and driving with the headlights on as visible reminders of the campaign's purpose. The department also created a training video, "What's Wrong With This Work Zone," and distributed it and other materials across the State to promote discussions of safety during daily crew meetings.

**Evolution of Work Zone Awareness Week**

1997 - VDOT's Bristol District develops an internal awareness campaign.

1998 - VDOT launches statewide public awareness campaign.

1999 - Caltrans initiates "Slow for the Cone Zone" public awareness campaign.

1999 - ATSSA, FHWA, and AASHTO agree to create National Work Zone Awareness Week.

2000 - First national event is held in Springfield, VA.

2001 - National event held on National Mall in Washington, DC.

http://www.tfhrc.gov/pubrds/10mar/08.htm
In the external component of the campaign, VDOT sought to increase the public's awareness of the dangers of traveling through work zones and encourage safe driving habits in work zones. The public outreach included radio ads, public service announcements (PSAs) developed with the Virginia Road and Transportation Builders Association (now the Virginia Transportation Construction Alliance), and work zone safety tips displayed at rest areas. Additional partners in the campaign included the Virginia State Police and a consortium of insurance companies called DRIVE SMART Virginia.

According to Rush, taking the program statewide and partnering with the police helped generate media attention. "We held press conferences at rest areas along the interstate in many of our districts and held safety breaks where our employees could talk with motorists stopping at the rest areas about driving safely through work zones," he says. "A few press conferences were held in work zones, where reporters were able to feel the speed of passing motorists while they stood behind the concrete barriers."
The effort seems to be paying off. Rush says Virginia has cut work zone fatalities to an average of 11 per year. "Since we have been doing this for over 10 years, we have greatly reduced the number of worker fatalities in work zones," he says. "And we have a much lower number of work zone and fatal crashes than other States that maintain fewer lane miles than Virginia, which has the third largest State-maintained roadway system in the country."

A California Campaign

Meanwhile, on the West Coast, the California Department of Transportation (Caltrans) saw the number of work zone crashes, injuries, and fatalities in the State increase significantly in 1998, despite efforts to promote safety. These crashes rose 20 percent that year to a record high of nearly 7,000.

In response, the following year Caltrans launched an expanded public awareness campaign to encourage drivers to slow down and drive more safely in work zones. In 2000, the department decided the expanded campaign needed a new theme to replace the previous slogan of "Give 'em a BRAKE," which dated to 1982. The department explored various ideas through focus groups and ultimately settled on "Slow for the Cone Zone®" for its campaign theme.

That expanded public awareness campaign complemented Caltrans's now nearly 20-year internal campaign to promote work zone safety among employees and honor those who lost their lives on the job. The internal campaign began as a small annual gathering in someone's office, then expanded to fill a conference room, and in 2002 grew into a major outdoor event in Sacramento's Capitol Park.

By 2004 Caltrans's annual Worker Memorial Day had moved to its current location on the steps of the State capitol. Caltrans also plans other safety awareness events the same week, such as Lights for Life, which encourages employees to drive their work vehicles with the headlights on all week, and a safety stand-down, which invites all 23,000 employees to attend a variety of classes and evaluations to improve safety.
Worker Memorial Day is the culmination of a year of planning that begins in August of the previous year. Planning begins with establishing a date (usually a Tuesday or Wednesday in mid-April to elicit more media coverage), obtaining a permit for the capitol grounds, and identifying any fallen workers from the past year and obtaining contact information for family members so they can be invited to the event.

Caltrans has a tradition of using an honor guard of 12 highway workers who represent those who lost their lives on the job. During the ceremony, the honor guards wear special uniforms and pay their respects to fallen coworkers by carefully passing orange cones from the center of a diamond-shaped cone display to the outside border. Each cone contains the name of a fallen worker printed on a black band wrapped around the cone. The event receives significant support from the donor-funded Caltrans Transportation Foundation.

### Planning for Annual Caltrans Highway Workers Memorial Day Event

Based on its years of experience planning its Workers Memorial Day event, Caltrans shares the following outline of steps and tips that could assist other States interested in developing similar events.

**Steps**

- Establish date and location.
- Obtain necessary permits.
- Identify any fallen workers from past year and collect contact information for their families.
- Identify honor guard.
- Identify and schedule greeters to distribute programs and memory ribbons.
- Personally invite families of those who died in past year and send invitations to all families of fallen workers on record from previous years.
- Invite dignitaries, including locally known emcee; State, Caltrans, and FHWA officials; union representatives; and industry partners.
- Order needed items (such as orange memory ribbons and a podium).
- Arrange for needed support staff (photographer, for example).

**Tips**

- Create a checklist for action items and items that must be ordered or created. Examples include creating a program, posters, and press releases, and requesting sponsorship from the State Senate or Assembly transportation committee chairperson.
- Choose a memorable focal point for the event. Caltrans creates an orange cone display as a diamond-shaped caution sign around the California State seal.
- Include onsite visual aids. Caltrans brings remnants of crashed vehicles and collage boards of photos of other crashes, arranges work vehicles at the curb with "In Memory" message boards, hosts the traveling National Work Zone Memorial during the event, and displays a memorial wreath.
- Find special ways to honor the fallen. Caltrans creates a program with the names and photographs of each fallen worker from the past year, obtains resolutions from officials (the Governor, for example) in memory of those recently killed, and hosts a reception for families where the resolutions are presented.
Honoring our fallen workers and getting to know their families has been a very emotional and rewarding experience that has been a highlight in my career," says Tamie McGowen, Caltrans assistant deputy director for public affairs. "It has been incredible to see what started as a small office gathering many years ago morph into such a tremendous and deserving tribute to those who gave the ultimate sacrifice.

### Going National

How did what started as individual State events become a national effort? As with many successful initiatives, National Work Zone Awareness Week had a champion.

VDOT's Rush, believing there is strength in numbers, thought it made sense to conduct the campaign nationwide, so he brought the idea to a meeting of the American Traffic Safety Services Association's (ATSSA) Safety and Public Awareness Committee at the 1998 ATSSA annual conference. With the committee's backing, a week later Rush gave a presentation on the idea to ATSSA's board of directors. The board liked the idea and decided to support creation of a national campaign.

In early 1999, ATSSA staff discussed the idea with the Federal Highway Administration (FHWA) and American Association of State Highway and Transportation Officials (AASHTO), and the two organizations decided to support the idea and help create a national effort. In May 1999, the first National Work Zone Awareness Week was held.

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**Caltrans**

At California's 2008 Workers Memorial Day event, the Caltrans Honor Guard Team honors the three fallen Caltrans workers that year, each remembered by one of the cones in front displaying a black name band.

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Transportation Officials (AASHTO), seeking their leadership as partners in launching the first National Work Zone Awareness Week. By December 1999 the three organizations had signed an agreement to create the national campaign.

**Goals of 1999 Agreement Creating National Event**

- Increase public awareness of need for greater caution and care while driving through work zones to reduce fatalities and injuries.
- Establish and promote a common set of safety tips for motorists.
- Increase public sector, industry, and worker awareness of the value of training and best practices regarding work zone safety.
- Establish a nationwide program to promote work zone safety.
- Communicate to workers and contractors the effects of motorist frustration with delays on their driving behavior and suggest possible actions to alleviate that behavior.
- Engage interested parties involved in work zone safety as partners.

Under the agreement, ATSSA would take the lead in coordinating national activities such as the official kickoff, AASHTO would promote the event among State departments of transportation (DOTs), and FHWA would share information about the event with the media, the public, and contractors through all its offices nationwide. All three organizations would identify coordinators and seek other partner organizations.

In 2008, WisDOT arranged to have Wisconsin's capitol dome lit with orange lights (shown here) as a memorial to workers who had died or been injured in work zones.

The set of national partners quickly expanded to include the American Road & Transportation Builders Association (ARTBA), The Associated General Contractors of America (AGC), and the three Washington, DC, area DOTs — VDOT, District Department of Transportation (DDOT), and the Maryland Department of Transportation's State Highway Administration (SHA).
Together, the partners established an executive committee and decided that the host location for the national event would rotate among the three DOTs, with the first national event to be held at a work zone in Springfield, VA, in April 2000. The partners also decided to keep the national event linked to daylight saving time, in early April. (The event remains scheduled in April even though daylight saving time was changed to March beginning in 2007.)

At that first event, the partners invited the media and gave interviews to promote the goals of the national event. Instead of the typical ribbon-cutting ceremony when a highway job is completed, the partners held a ribbon-tying ceremony during which they tied orange ribbons on vehicle antennae. The event also included remarks from a family that traveled from North Carolina to share its story about a loved one who had been killed in a work zone. "The media took to the family's story the most and used it in their coverage to help convey a personal message of the importance of work zone safety," Rush recalls.

Growth Over 10 Years

After the first national event, other States quickly joined in the effort by holding their own events, often following the model set by the national executive committee. Today virtually every State DOT holds an annual work zone awareness event. Following are some snapshots of States' experiences.

Florida. According to the Florida Department of Transportation (FDOT), typical activities in the State associated with National Work Zone Awareness Week include lobby displays in FDOT headquarters, FDOT district offices, and the State capitol; a work zone video playing continuously in district office lobbies; an ATSSA meeting with the Florida House and Senate to promote the week's safety messages; educational folders/flyers distributed by FHWA; and promotional items given out by FDOT.

FDOT also has created PSA campaigns that are scheduled to run around the time of National Work Zone Awareness Week and continue during part or all of the year. In 2005, in response to an increasing trend of traffic crashes, injuries, and fatalities in Florida work zones, FDOT created a campaign that began during the national awareness week and ran for the remainder of the year. To enhance the campaign's effectiveness, FDOT partnered with other organizations and tackled the problem from several angles, including engineering, enforcement, and public information and education.

From the engineering and enforcement side, the department deployed motorist awareness systems (MAS) on construction projects located on multilane, high-speed (55 miles per hour, 88.5 kilometers per hour, or greater) facilities that had lane closures when workers were present. The goal was to manage speeds and increase driver awareness of the workers in the work zone. The MAS included law enforcement officers, "Speed Limit When Flashing" portable regulatory speed limit signs, radar speed display units, and portable changeable message signs. FDOT also used safety-related messages on variable message signs around the State to publicize awareness week and funded speed enforcement operations in advance of work zones to increase police presence and encourage safer driving. The department changed the specifications for sign sheeting to require highly reflective fluorescent orange for all work zone signs.

On the education side, FDOT developed PSAs with the theme "Work Zone Safety. It's Everyone's Job." The campaign included print materials and a new Web site, www.itseveryonesjob.com. FDOT estimates the Web site had about 30,000 hits, more than 20,000 brochures were handed out, and about 6 million people heard or saw the PSAs.

Building partnerships can make a big difference. In 2008, FDOT created new 30-second PSAs on work zones, two for television and one for radio. FDOT
wanted to reach all markets across the State but had a budget of only $25,000 for a 90-day media buy, so it sought the support of partners. The Florida Association of Broadcasters, which operates a statewide media partnership for nonprofits, bought time in volume and gained the statewide market saturation that FDOT wanted. The association also was able to broker extra placements due to availability of spots in the PSA rotation cycle, extending the original 90-day campaign to 240 days at no additional cost. Other partners making the statewide campaign possible were the Florida Transportation Builders’ Association and Florida Institute of Consulting Engineers, each of which donated $25,000.

Wisconsin. The Wisconsin Department of Transportation (WisDOT) has used PSAs and displays in government buildings and at special events to raise awareness of work zone safety. In addition, WisDOT persuaded the Governor to proclaim Work Zone Awareness Week and have the capitol dome lit with orange lights for April 20-25 in 2008. The orange lighting served as a memorial to workers who were killed or injured in work zones.

Also in 2008, WisDOT introduced an 11-minute educational video and new set of television and radio PSAs that took a strong emotional approach by featuring people who had been directly affected by crashes in work zones. The agencies thought that showing a "slice of life" of those affected by work zone crashes might be more effective than just telling people what to do.

Filming the stories of those featured in the PSAs inspired WisDOT officials to develop a special program held at the State capitol in April 2008. WisDOT invited the surviving families of all workers killed in work zone crashes since 1980 (the earliest records WisDOT had) to attend the event. During the program, WisDOT introduced the new video and some of the PSAs and invited surviving family members to come forward to receive flowers to place beside photos of their loved ones on a nearby table. "Lighting the dome and holding the ceremony at the capitol attracted much media attention, including a lead story on several local TV stations that evening," says Michael Goetzman, program officer in WisDOT’s Office of Public Affairs.

Virginia. VDOT has continued its statewide campaign every year since 1998. During Work Zone Awareness Week, VDOT sends a daily message on work zone safety to employees and records a short video from the commissioner that is shown to employees during safety meetings. Employees also receive
keepsakes, such as a key chains, lunch bags, or flashlights (used the year the national theme was night work), to remind them to work safely. VDOT also airs PSAs to educate the public and has done extensive outreach to teenagers. Since 2006, the agency has held a recognition event at the VDOT Workers’ Memorial located off I-64 near Charlottesville. In addition, the department and FHWA’s Virginia Division Office continue to offer safety information at rest areas across the State during awareness week.

California. Caltrans has learned many tips from its extensive campaigns. One is to create messages that motorists can personally relate to, which echoes WisDOT's experience with its PSAs, and to tell drivers specific ways to be safe (allow more following room and avoid using cell phones, for example). Caltrans also finds it helpful to target messages to drivers at traffic schools and to students in high school driver's education classes, an approach that VDOT has used as well.

Promoting the National Event

Not only did National Work Zone Awareness Week grow geographically, it grew in the use of symbols, guest speakers, and themes. In 2001 the national event introduced the "field of cones" display, which featured a formation of orange cones set out to signify all those who died in work zones that year. This made for a dramatic display on the National Mall in Washington, DC, where passersby could see the cones and visit one of the nearby tables or tents to ask what was going on and thus become more aware of work zone safety. The cone display caught on and has since been used whenever practical at the national event, as well as at many State DOT events.

In 2001 the tradition of having key public officials speak at the national event began with then-U.S. Transportation Secretary Norman Mineta as the featured speaker. In 2002, the featured speaker was Congressman James Oberstar (D-MN), at the time the ranking Democrat on the House Transportation and Infrastructure Committee. He has continued to support the event over the years. Since then, key public officials have regularly participated as guest speakers.

In 2002, ATSSA debuted the National Work Zone Memorial, a traveling exhibit upon which the names of those killed in work zones across the country are inscribed. The memorial has become a regular feature at National Work Zone Awareness Week events, as well as other work zone safety events.
Role of Themes

Themes became part of the national effort in 2004. FHWA officials suggested use of a theme conveying that the roadway is analogous to an "office" for road workers. The idea was to appeal to motorists who could relate to how strange it would be to have cars and trucks driving by just inches from their desks. The idea caught on and became the theme for that year. The message was reinforced by a poster showing a VDOT photo of a desk and workers on the road. Then-Federal Highway Administrator Mary Peters also helped reinforce the message by giving interviews while wearing a hard hat and reflective vest, seated at a desk set up onsite at the Springfield Interchange project in Virginia.

Recognizing that more than four out of five fatalities in work zones are motorists or their passengers, the themes have often focused on motorists. In 2005 the theme focused on enforcement to encourage motorists to obey the posted speed limits set for work zones. The 2006 theme reflected the growing amount of night work performed on U.S. roads and kicked off with a nighttime event.

A team from FHWA held a brainstorming session to develop ideas for a theme for the 2007 campaign and proposed "Signs of Change," which the committee adopted. "Signs of Change" had several meanings. First, the theme was a reminder to motorists that when they see orange signs they should be ready for changed road conditions ahead. Second, it communicated to the public and motorists to be patient because road work is a sign of an improved travel experience coming in the near future. Third, it pointed out that DOTs are changing some of their traditional approaches by using new techniques and technologies, such as accelerated construction and intelligent transportation systems (ITS), to manage traffic in work zones and improve motorists' experiences driving in and around work zones.

Road Show

In 2008 the national event took to the road, all the way to Sacramento. Caltrans requested the opportunity to host the event, and the executive committee agreed that moving the event to a different State every other year would help increase media exposure. The events in between will continue to be held in the Washington, DC, area, which was the original host due to its standing as a national media hub.

Caltrans picked the theme for 2008, using its successful "Slow for the Cone Zone" campaign. "Caltrans drew on its experience to host a memorable event and make the first installment of the 'road show' a great success," says Safety and Design Team Leader Ken Kochevar with the FHWA California Division Office. An estimated 1,000 people attended, including more than 100 family members of fallen workers from as far away as Utah.

After the Washington, DC, area event in 2009, the road show heads to New York City in April 2010.

Assessing Results

What has been the impact of 10 years of National Work Zone Awareness Week events? VDOT's Rush notes that his agency has seen work zone fatalities decrease, dropping from 17 to 11 to 7 annually from 2006 to 2008, even though almost the same number of contracts and similar dollar values of work were done each of those years. Based on talks with motorists at rest
areas, VDOT officials believe there is growing understanding of the dangers of work zones. Rush adds, "Our employees really appreciate the public's efforts to be more aware of how they are driving in work zones. The safer they drive, the fewer crashes we'll have."

Goetzman says WisDOT also sees positive effects. "It seems that when we run our PSAs aggressively it does affect the number of people killed in Wisconsin work zones," he says. For example, he notes that between 2000 and 2002, when WisDOT ran new PSAs, there were 7 or 8 work zone fatalities each year, while in the years before that Wisconsin saw double-digit fatalities. Fatalities were again higher leading up to the latest PSAs — 14 in 2006 and 11 in 2007 — but after the PSAs were released in 2008, fatalities again dropped, to 8.

**Awareness Week Themes**

<table>
<thead>
<tr>
<th>Year</th>
<th>Theme</th>
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<tbody>
<tr>
<td>2004</td>
<td>The Worker's Office Is the Roadway</td>
</tr>
<tr>
<td>2005</td>
<td>Enforcement: Slow Down or Pay Up</td>
</tr>
<tr>
<td>2006</td>
<td>Night Work: Working at the Speed of Night</td>
</tr>
<tr>
<td>2007</td>
<td>Signs of Change</td>
</tr>
<tr>
<td>2008</td>
<td>Slow for the Cone Zone</td>
</tr>
<tr>
<td>2009</td>
<td>Drive to Survive, Our Future Is Riding on It</td>
</tr>
<tr>
<td>2010</td>
<td>Work Zones Need Your Undivided Attention</td>
</tr>
</tbody>
</table>

California's data on work zone crashes, injuries, and fatalities indicate that not only is awareness up, but the campaigns appear to have influenced behavior as well. Through surveys, Caltrans estimates that more than half the State population is aware of the "Slow for the Cone Zone" slogan, and 86 percent of drivers said the slogan had an impact on their driving in work zones. From 1998 through 2008, crashes fell nearly 36 percent, motorist injuries went down almost 41 percent, and motorist deaths fell more than 16 percent — all while traffic and the number of work zones increased on State highways.

California, Virginia, and Wisconsin officials each point to their National Work Zone Awareness Week campaigns as being a key component in improving work zone safety and awareness. The States also cite other efforts, including designing more effective work zones, training workers, and improving traffic control setups in the field, as playing important roles in improving work zone safety. California officials also note that having work zones as a challenge area in the State's Strategic Highway Safety Plan has contributed to gains in work zone safety. To leverage the educational component of its work zone awareness campaign, FDOT has collaborated with FHWA to provide maintenance of traffic training to more than 57,000 State DOT employees, local government officials, and contractors between 2000 and 2008. The training is provided at various times throughout the year and lasts for 3 days, with a final exam given at the end of the course. Certification for those completing the training lasts 4 years.

Nationally, over the 10 years since the first awareness week, practices such as accelerated construction and full road closures have grown more popular and helped reduce workers' exposure in the work zones where they have been used. Use of ITS technologies to keep travelers informed, manage queues, and automate enforcement, and use of data and process reviews to identify areas for improvement, also have grown and helped increase safety and mobility in work zones.
During the same period, Federal regulations have expanded to require a more comprehensive approach to work zone planning and implementation (23 CFR 630 Subparts J and K) and the use of high-visibility safety apparel by workers. As a result of Subpart J, all States have developed work zone policies for the systematic consideration and management of work zone impacts. Resources like the National Work Zone Safety Information Clearinghouse (www.workzonesafety.org) and FHWA's work zone Web site (www.fhwa.dot.gov/workzones) have expanded to provide a broader array of information on effective practices. All of these efforts work together with the outreach efforts of awareness week to advance safe and smooth traffic flow in work zones.

Work zone safety affects both motorists and workers, and the trends in both areas have been heading in the right direction. Yet more remains to be done to save lives and prevent injury. National Work Zone Awareness Week will continue to be a rallying point for FHWA, State DOTs, and others committed to highway safety.

**Caltrans**

*When the national event went on the road in 2008, Caltrans hosted it in Sacramento. In front of the State capitol, attendees are seated around orange traffic cones arranged in memory of fallen workers.*

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